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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/576,227	04/13/2006	Riki Okamoto	52433/843	6918
26646 7590 11/10/2008 KENYON & KENYON LLP ONE BROADWAY NEW YORK, NY 10004				
EXAMINER YANG, JIE				
ART UNIT		PAPER NUMBER		
1793				
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11/10/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/576,227

**Applicant(s)**

OKAMOTO ET AL.

**Examiner**

JIE YANG

**Art Unit**

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 July 2008.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3 and 5-11 is/are pending in the application.  
4a) Of the above claim(s) 6-8 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1,3,5 and 9-11 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-8508)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

Claims 2, 4, and 12-15 have been cancelled; claim 1 has been amended; claims 6-8 are withdrawn as non-elected claims; and claims 1, 3, 5, and 9-11 are pending in application.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsutomu (JP2001-342543 A, thereafter JP'543).

JP'543 is applied on claims 1, 3 for the same reason as stated in the previous office action marked 2/6/2008.

Regarding the newly added limitation of composite precipitates in the instant claim 1, JP'543 teaches that steel sheet is characterized by containing between  $1.0 \times 10^3$ – $1.0 \times 10^7$  pieces/mm<sup>2</sup> of composite precipitates of MgO and (Nb,Ti)N of not smaller than 0.05μm and not larger than 5μm (Claim 2 of JP'543), which overlaps the composite precipitates:  $5.0 \times 10^2$ – $1.0 \times 10^7$

pieces/mm<sup>2</sup> of MgO, MgS and (Nb,Ti)N of not smaller than 0.05μm and not larger than 3.0μm as recited in the instant claim.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP'543 as applied to claim 1 above and in view of Koo (US 6,224,689, thereafter US'689) and Tsutomu (JP2002-020838 A, thereafter JP'838).

JP'543 in view of US'689 and JP'838 is applied on claim 5 for the same reason as stated in the previous office action marked 2/6/2008.

Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP'543 as applied to claim 1 above and in view of Tsutomu (JP2002-020838 A, thereafter JP'838).

JP'543 in view of JP'838 is applied on claims 9-11 for the same reason as stated in the previous office action marked 2/6/2008.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1, 3, 5, and 9-11 have been considered but are moot in view of the new ground(s) of rejection.

Regarding the Applicant's arguments filed on 7/7/2008 with respect to claims 1, 3, 5, and 9-11, the applicant argues: JP'543 does not disclose or suggest a refinement

of (Ti,Nb)N using Mg sulfides; JP'838 and US'689 do not disclose or suggest the characteristic features of the present invention which control the amount of O, Mg, Mn, and S for finely dispersing (Ti,Nb)N and Mg oxides using Mg sulfides. In response, as pointed out in the previous office action marked 2/6/2008, JP'543 teaches an alloy with all the composition range overlapping the composition ranges as recited in the instant invention, specifically, JP'543 teaches Mg from 0.0005 to 0.01wt% and S less than 0.009, which overlap the Mg: 0.0006 to 0.01wt% and S: 0.0005 to 0.009wt% as recited in the instant claim. JP'543 teaches the similar alloy with the overlapping composition and the similar microstructure for the similar hole-expanding application as recited in the instant invention. Therefore, the Mg sulfides and its refinement effect to (Ti,Nb)N as recited in the instant claim 1 would inherently exist. MPEP 2112 III&IV. This position is also supported by the comparison data of tensile strength and the hole-expanding ratio: JP'543 teaches that the hole-expanding ratio is about 130% at the tensile strength 600N/mm<sup>2</sup> and is about 70% at the tensile strength 1000N/mm<sup>2</sup> (Fig.2 of JP'543), which is at the same level as disclosed in the instant invention, for example, the hole-expanding ratio about 80-140 at the tensile strength 600N/mm<sup>2</sup> (Fig. 4, and 8 of the instant specification); and about 40-90% at the tensile strength 1000N/mm<sup>2</sup> (Fig. 2, 4, and 8 of the instant specification) (also can refer to the attached Fig.A in the applicants' argument, but Fig.A does not cover all the data of the instant invention and the closest pre-arts). The Examiner notices there are no unexpected results in term of the hole-expanding ratio to the tensile strength in the record to support the applicants' arguments.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jie Yang whose telephone number is 571-2701884. The examiner can normally be reached on IFP.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-2721244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JY

/Roy King/  
Supervisory Patent Examiner, Art Unit 1793